

WHAT IS CLAIMED IS:

1. A cement composition for a liquid casting with a binder and additives, the binder comprising Portland cement and the additives comprising at least one fluidizer, wherein the additives include a combination of a thickening agent acting by steric exclusion and a gelling thickening agent.

2. A cement composition according to claim 1, wherein the binder comprises Portland cement without the addition of calcium sulfate other than a setting regulator.

3. A composition according to claim 1, which comprises, per 100 parts by weight of Portland cement, 1 to 5 parts of a methacrylate base fluidizer or a polynaphtalene sulfonate or melamine sulfonate fluidizer.

4. A composition according to claim 3, which comprises, for 100 parts of Portland cement, 0.03 to 1 part of fluidizer, 0.02 to 1 part of thickening agent acting by steric exclusion, and 0.01 to 0.5 part of gelling thickening agent.

5. A composition according to claim 4, which comprises, per 100 parts of Portland cement, from 0.13 to 0.5 part of fluidizer, from 0.1 to 0.3 part of thickening agent acting by steric exclusion, and from 0.05 to 0.15 part of gelling thickening agent.

6. A composition according to claim 1, which also comprises a surface active agent.

7. A composition according to claim 6, which comprises from 0.01 to 0.15 part of surface active agent, per 100 part by weight of Portland cement, permitting adjusting the quantity of entrapped air between approximately 15 and 20% by volume in the final material.

8. A composition according to claim 1, which is mixed with an aggregate.

9. A composition according to claim 8, wherein the aggregate is sand of a granulometry less than or equal to about 5 mm.

10. A composition according to claim 1, to which is added water in a proportion of 40 to 90 parts by weight.

11. A composition according to claim 1, wherein the thickener acting by steric exclusion is selected from polysaccharides and hydrosoluble synthetic polymers of high molecular weight.

12. A composition according to claim 1 wherein the thickener acting by steric exclusion is selected from cellulose ethers, xanthan gum, guar gum or caruba.

13. A composition according to claim 1, wherein the gelling thickening agent is selected from hydrophobically modified hydrocolloids, hydrophobically modified polysaccharids and hydrosoluble polymers of modified hydrophobic acrylic or urethane base.

14. A composition according to claim 13, wherein the gelling thickening agent is a hydrophobically modified bloc copolymer of polyethylene oxide and urethane.

15. A method of producing a self-leveling liquid casting, comprising producing a cement composition according to claim 1, and then casting it into a mold.

16. The process of production of a self-leveling casting from the cement composition according to claim 1, carried out in only a single casting no matter what the thickness of this casting.

17. A self-leveling casting produced from a cement composition according to claim 1.

18. A self-leveling casting according to claim 17, which has a density comprised between about 1.6 and about 1.9.

19. A self-leveling casting according to claim 17, which has a thickness greater than about 6 cm.